Received 3/7/05

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3 March 2005

Paul -

Please find enclosed my comments, The picture of Lester Snow, and The marked up document.

if you have any questions, please send an email or call me on The telephone.

Best regards.

Lisa

Water Today

California is a state of great diversity. Nationwide, no other state can match the variety of California's cultures, ecosystems, geography, and hydrology. This diversity brings distinct challenges to the management of California's water resources. Most of the state's snow and rain fall in the mountains; most of the water is used in the valleys and coastal plains. Precipitation totals vary from year to year and from place to place. Wet years can bring the threat of floods; drought years put pressure on available water supplies.

On a statewide basis, California is fortunate to have enough water in years with normal precipitation. Over the past 50 years, Californians have been able to meet water demands primarily through an extensive network of water storage and conveyance facilities, groundwater development, and, more recently, by improving water use efficiency.

A big challenge now and for the future is to make sure water is in the right places at the right times. Challenges will be greatest during dry years. Water made available for the environment is curtailed sharply in these years. Greater reliance on groundwater during dry years results in higher costs for many users. At the same time, water users who have already increased efficiency may find it more challenging to achieve additional water use reductions during droughts. As competition grows among water users, water management during dry years will become more complex and, at times, contentious.

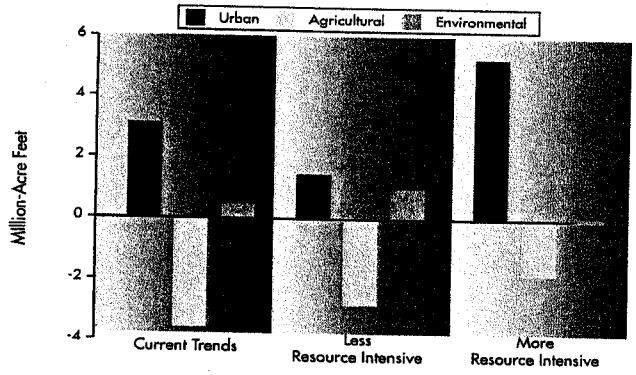
Over the past 50 years, we have been able to meet our water demands primarily through an extensive network of water storage and conveyance facilities, groundwater development, and, more recently, by improving water use efficiency.

Water 2030

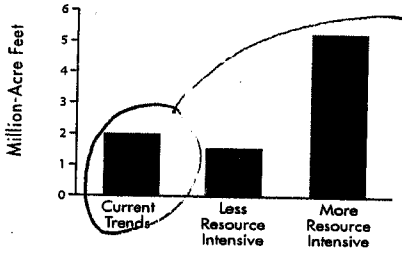
agricultural water use will decline. Urban water demand will increase, especially in the southern part of the state where population growth is greatest. The increasingly productive economy is using water more efficiently but will still need adequate and reliable supplies of sufficient quality for future growth.

These scenarios clearly show that water demands will change significantly throughout the state by 2030. The specific changes are uncertain and will vary widely from region to region, sector to sector. These kinds of changes are best managed using diversified integrated regional water management supported by strong statewide water systems.

Changes by Sector



Changes, Including Groundwater Overdraft*



use a different color
this is same color as urban in adjacent chart

*Totals for all 3 scenarios include an additional 2 million acre-feet per year needed to eliminate statewide groundwater overdraft.

Scenarios

Current Trends:

Recent trends continue for population growth and development patterns, agricultural and industrial production, water dedicated for the environment, and background water conservation measures (changes in plumbing codes, etc.).

Less Resource Intensive:

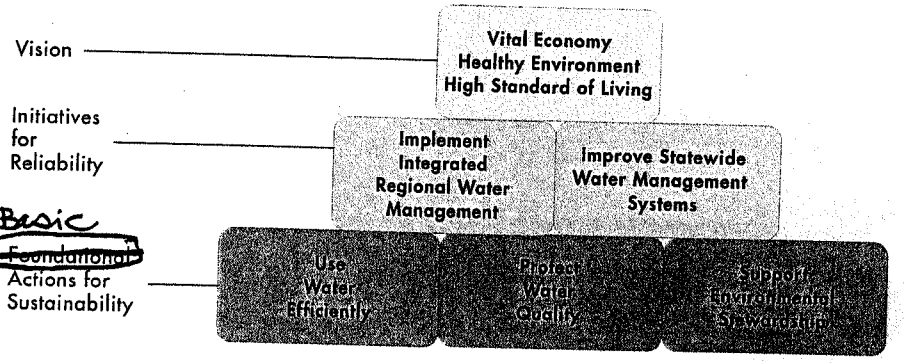
Higher agricultural and industrial production, more water is dedicated for the environment, and more efficiency is gained through background water conservation measures that water users implement on their own, without prompting from a water supplier.

More Resource Intensive:

Higher agricultural and industrial production, water dedicated for the environment remains at year 2000 levels, less efficiency is gained through background water conservation, and California's population growth exceeds today's trends.

Is the scenario quoted?

The Roadma



California needs a **sustainable** and **reliable** water supply in 2030. To ensure that our water use is **sustainable**, California water management must be based on three foundational actions:

- Use water efficiently
- Protect water quality
- Manage water in ways that protect and restore the environment

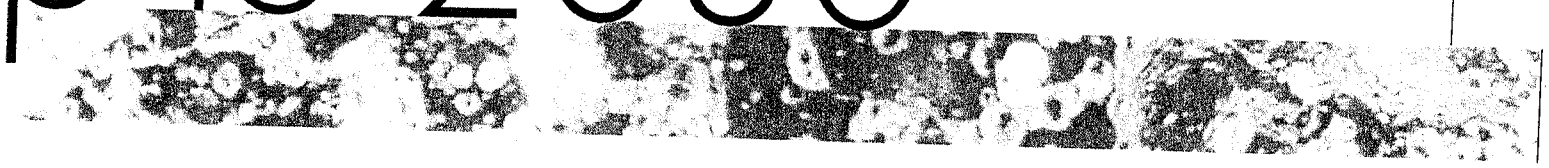
To ensure that our water supplies are **reliable**, water management must pursue two initiatives that incorporate these actions:

- Promote and practice integrated regional water management
- Maintain and improve statewide water management systems, the backbone of water management in California

VISION

California Water Plan Update 2005 is a roadmap for meeting the state's water demands through the year 2030. It identifies the most pressing water management issues and challenges affecting the state and its regions. It also recommends policies, management strategies, and collaborative approaches that will help balance and guide future investments to make the most of our water resources. These recommendations are listed at the end of the Highlights and detailed in the Implementation Plan in Volume 1 of Update 2005.

p to 2030



Actions to Ensure Sustainability

To minimize the impacts of water management on California's natural environment and ensure that our state continues to have the water supplies it needs, Californians must **use water efficiently** to get maximum utility from existing supplies. Californians are already leaders in water use efficiency measures such as conservation and recycling. Because we live in an arid state, we must continue these efforts and be innovative in our pursuit of efficiency. Water use efficiency will continue to be a primary way that we meet increased demand.

In the future, we must broaden our definition of efficient water use and include other ways of getting the most utility out of our water resources and water management systems:

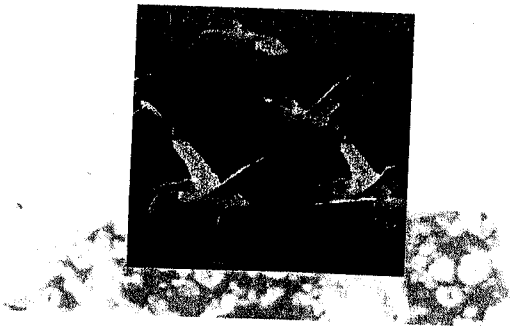
- Increase levels of urban and agricultural water use efficiency
- Increase recycled municipal water and expand its uses
- Reoperate water facilities to improve their operation and efficiency
- Facilitate environmentally and economically sound transfers to avoid regional shortages
- Reduce and eliminate groundwater overdraft

As California's population grows from 36.5 million to 48 million, there is bound to be an effect on California's environment. By wringing every bit of utility from every drop of water, Californians can stretch water supplies and help ensure continued economic and environmental health.

California must also **protect water quality** to safeguard public and environmental health and secure the state's water supplies for their intended uses. Water supply and water quality are inseparable in water management. While implementing projects to reduce water demand or to augment supply, water managers must employ methods and strategies that protect and improve water quality:

- Protect surface waters and aquifers from contamination
- Explore new treatment technologies for drinking water and groundwater remediation
- Match water quality to its intended uses
- Improve management of urban and agricultural runoff
- Improve watershed management

California Water Plan Update 2005 is a roadmap for meeting the state's water demands through the year 2030.



The Roadmap to 2030

In the future, water supplies and the environment must ~~both~~ be considered together.

To ensure sustainability, California must also **manage water in ways that protect and restore the environment.** Water is a vital natural resource for people and the environment, so water management activities must occur in the context of resource management and environmental protection. Water development in California has a rich history of conflict, at times pitting water supply projects against ecosystem protection. In the future, water supplies and the environment must ~~both~~ be considered together. Water managers must support environmental stewardship as part of their management responsibilities.

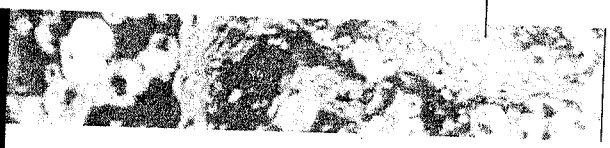
As water managers develop and deliver reliable water supplies, environmental stewardship can be incorporated in many ways:

- Integrate ecosystem restoration with water planning and land use planning
- Restore and maintain the structure and function of aquatic ecosystems
- Minimize the alteration of ecosystems by water management actions
- Improve watershed management
- Protect public trust resources
- Integrate flood management with water supply management

Water management activities will often have unavoidable environmental consequences: when water is removed from the natural environment for other beneficial uses, the environment is affected. ~~In carrying out~~ water management activities, Californians must acknowledge these environmental costs and ensure that restoration actions are carried out to maintain and improve environmental health.

Initiatives to Ensure Reliability

Two key initiatives in the California Water Plan outline the ways we will ~~achieve~~ support the ~~foundational~~ actions. The initiatives will ensure that Californians have enough clean and affordable water through the year 2030.



The first initiative is to **continue recent progress in implementing integrated regional water management**. California Water Plan Update 2005 identifies 25 strategies to help meet regional water demands and goals in the context of broader resource management. These strategies include water use efficiency, recycling, desalination, and storage; as well as improving water quality, management of floodplains, runoff and watersheds, and ecosystem restoration. By following these management strategies, communities can plan, invest, and diversify their water portfolios. The strategies will help regions become more self-sufficient with local supplies and will minimize conflicts with other resource management efforts.

Integrated regional water management is an approach that will help communities and regions incorporate sustainability actions into their water management efforts. Actions to use water efficiently, protect water quality, and restore the environment will be most successful when they are part of an integrated program.

This initiative includes the following elements:

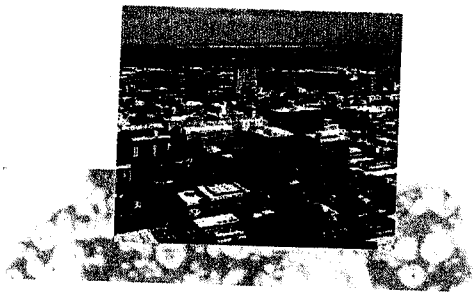
- Foster regional partnerships
- Develop integrated regional water management plans
- Diversify regional water portfolios

The second initiative is to **maintain and improve statewide water management systems**, which operate our reservoirs, canals, treatment plants, and levees. Californians have developed vast water management systems that provide for the delivery of base water supplies throughout the state, transfer of water between users, treatment and distribution of water within service areas, protection from floods, and the sharing of supplies during emergencies. These systems make up the backbone of water management in California, and must be maintained so that water is available when and where it is needed.

This initiative includes meeting major State government responsibilities for statewide water planning, water quality protection, and ecosystem restoration. The State must continue to lead collaborative efforts to find solutions to water issues having broad public benefits such as protecting and restoring the Delta, Salton Sea, Mono Lake, Klamath basin, and Lake Tahoe.

This initiative includes the following actions by State, federal and local agencies and governments:

- Maintain aging facilities
- Implement the CALFED Program
- Improve flood management
- Sustain the Sacramento-San Joaquin Delta



Initiative 1

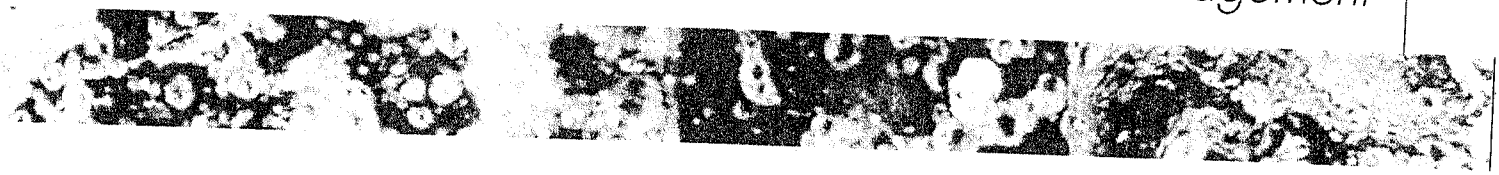
- Foster regional partnerships
- Develop integrated regional water management plans
- Diversify regional water portfolios

Over the past 50 years, California has met much of its increasing water demands with inter-regional projects. Although these State, federal, and local projects now serve as the backbone of California water management, by themselves they cannot provide for our growing population, changing agricultural production patterns, and environmental needs. However, regional partnerships can efficiently solve water management problems, and they can consider multiple resource issues. Regions have opportunities not available to individual water suppliers. With State government leadership, assistance and oversight, regional water planning and management will help meet water needs through 2030. Integrated regional water management relies on a diversified portfolio of water strategies. The resulting regional plans can ~~provide efficient solutions,~~ consider other resource issues, ~~and~~ enjoy broad public support.

California Water Plan Update 2005 identifies near-term actions that will stimulate progress toward achieving integrated regional water management. It also specifies comprehensive actions that will foster success over the long term. Some of these key ~~actions~~ include the following:

Promote integrated regional water management to ensure sustainable water resource use, better water quality, environmental stewardship, efficient urban development, protection of agriculture, and a strong economy.

Promote and Practice Integrated Regional Water Management



Foster Regional Partnerships

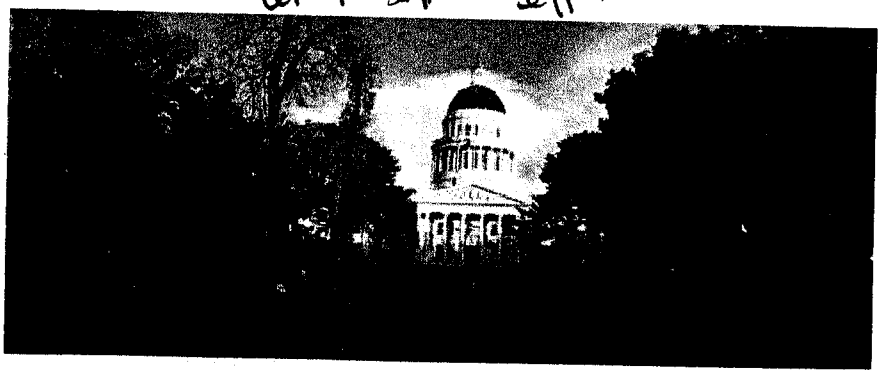
Water suppliers that form partnerships with other entities in their region can accomplish projects and provide benefits that no single agency could do alone. For example, partnerships may allow agencies to improve their water supply reliability by establishing emergency connections with neighboring water suppliers; increase operational flexibility by participating in regional groundwater management and conjunctive use; protect water quality by participating in regional watershed management; reduce costs by cooperating with other agencies on water conservation and outreach programs; facilitate new projects by contributing to local habitat conservation plans; and help achieve many other regional resource management objectives.

Partnerships can lead to the preparation of integrated regional water management plans and regional eligibility for certain grant funds. Early coordination with land planning agencies may help water suppliers and land planners anticipate and plan for future growth, and ensure that additional regional growth will not exceed water suppliers' capabilities. Ultimately, regional partnerships will enable optimum management of water and other resources within a region.

I suspect it won't be optimum — let's go for efficient or effective

Develop and Implement Integrated Regional Water Management Plans

California is placing more emphasis on integrated regional water management. With this inclusive systems approach, local agencies and governments can be more flexible and act more efficiently. This approach makes better use of existing local resources. It integrates multiple aspects of managing water and related resources such as water quality, local and imported water supplies, watershed protection, wastewater treatment and recycling, and protection of local ecosystems.



With State government leadership, assistance and oversight, regional water planning and management will help meet water needs through 2030.

Initiative 1 *Integrated Regional Water Ma*

Principles of integrated regional water management

- Use a broad, long-term perspective
- Identify broad benefits, costs, & tradeoffs
- Promote sustainable resource management
- Increase regional self-sufficiency
- Increase regional drought preparedness
- Use open forums that include all communities
- Promote coordination & collaboration among local agencies & governments
- Use sound science, best data, & local knowledge

The principles of integrated regional water management have a broad and long-term perspective. By applying the principles, regions develop plans that have multiple benefits. As an example, in some areas of the state, agricultural users have developed projects that simultaneously conserve water, reduce contaminants, preserve the agricultural economy, and improve aquatic habitat.

State government must help cities, counties, local water agencies, and private utilities to prepare useful integrated regional water management plans. With the State's help, local agencies and governments will put into effect existing legislation and State policies that improve coordination between water and land use planning.

Diversify Regional Water Portfolios

Every region of California must build a balanced water portfolio that increases water use efficiency and maximizes our return on investment in sound water management policies. Every time water is wasted, money and a precious resource go down the drain. Continued investment in our existing facilities and carefully planned new water developments will provide the strong foundation to meet future needs. ~~But~~ Therefore, Californians ~~also~~ must promote water conservation and recycling, enhance groundwater storage, provide adequate supplies of water for the environment, and support innovative water technologies such as desalination to reduce the impacts of droughts, support a vibrant economy, and meet water needs for the future.

water use efficiency is/includes water conservation & recycling & GW storage

nagement

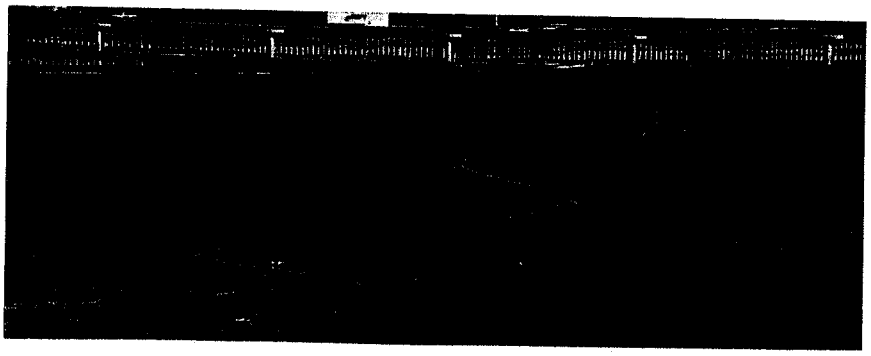
California's regions cannot meet all of their water objectives with a single strategy. This water plan update describes 25 resource management strategies. These strategies are like individual tools in a tool kit. Just as the mix of tools in a tool kit will vary depending on the job, the combination of strategies varies from region to region depending on the individual situations surrounding water supply and use, climate, projected growth, and environmental and social conditions.

A diverse portfolio of water management strategies is essential to provide the flexibility needed to cope with changing and uncertain future conditions.

Essential Support Activities

The Framework for Action also identifies the following support activities, which are essential to all the actions and initiatives.

- Reform State government for effective leadership, assistance and oversight
- Clarify State, federal and local roles & responsibilities
- Develop funding strategies & clarify role of public investments
- Increase tribal participation and access to funding
- Ensure Environmental Justice across all communities
- Adapt for global climate change impacts
- Invest in new water technology
- Improve water data management and analysis
- Increase scientific understanding



Investing in the

By making the right choices, regions can diversify their water portfolio, make the right investments, and meet their water demands in 2030. Each region chooses an appropriate mix of resource management strategies based on its own water management objectives and goals: reduce water demand, improve operational efficiency and transfers, increase water supply, improve water quality, and practice resource stewardship.

be explicit THAT These are The 25 strategies

Improve water quality

Improved water quality can directly improve the health of Californians and our ecosystems.

- Drinking Water Treatment and Distribution
- Groundwater-Aquifer Remediation
- Matching Quality to Use
- Pollution Prevention
- Urban Runoff Management

• Ag Runoff Mgt? Where does this fit?

Practice resource stewardship

We must protect other resources as we make water supplies available for other beneficial uses.

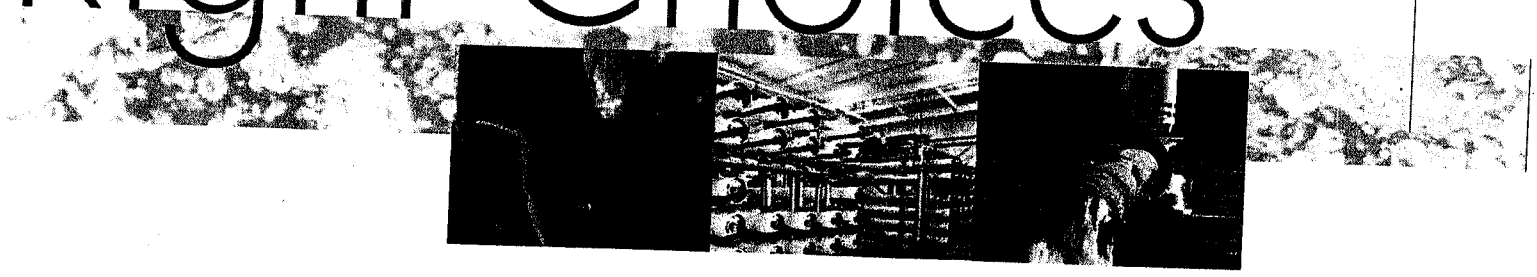
- Agricultural Lands Stewardship
- Economic Incentives (Loan, grants, and water pricing)
- Ecosystem Restoration
- Floodplain Management
- Recharge Areas Protection
- Urban Land Use Management
- Water-dependent Recreation
- Watershed Management

Improve operational efficiency and transfers

California's water system responds to our need to move water from where it occurs to where it will be used.

- Conveyance
- System Reoperation
- Water Transfers

Right Choices



Reduce water demand

Water conservation has become a viable long-term supply option because it saves considerable capital and operating costs for utilities and consumers, avoids environmental degradation, and creates multiple benefits.

- Agricultural Water Use Efficiency
- Urban Water Use Efficiency

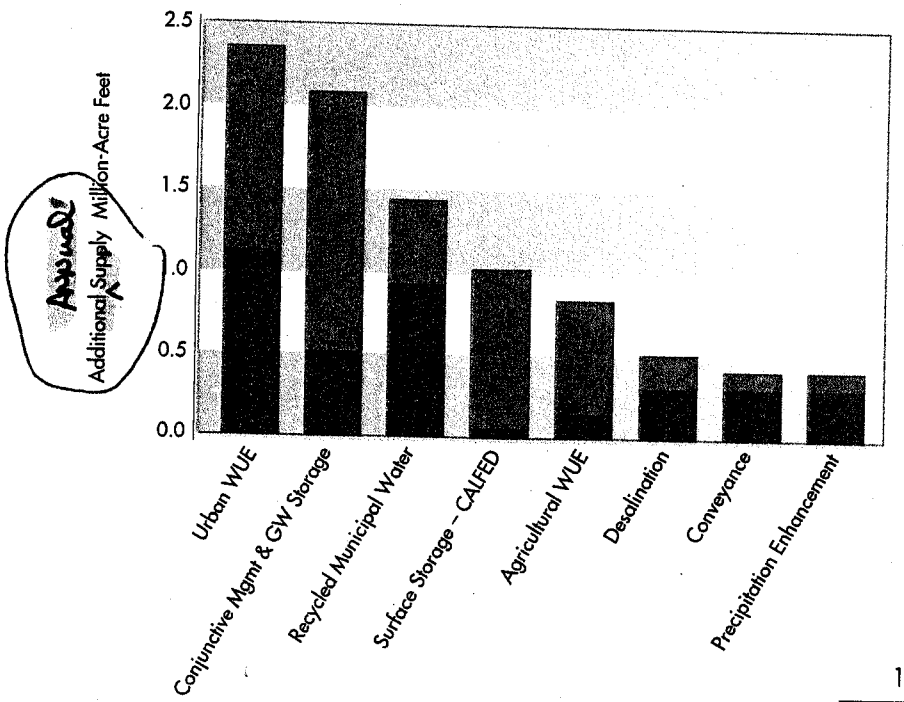
Increase water supply

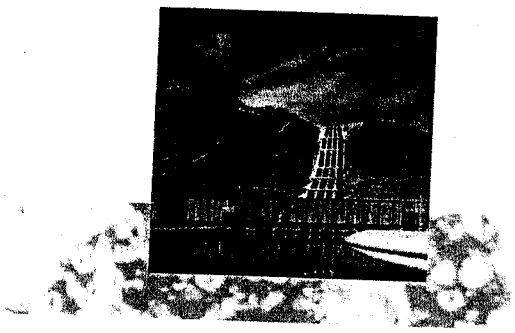
California's communities are finding innovative ways to generate new supplies.

- Conjunctive Management and Groundwater Storage
- Desalination— brackish/seawater
- Precipitation Enhancement
- Recycled Municipal Water
- Surface Storage—CALFED
- Surface Storage— Regional/local

Range of Additional Supply for Eight Resource Management Choices

This graph shows the potential range of additional water supply benefits of eight resource management strategies. Low estimates of water supply benefits are shown in the lower (dark blue) section of each bar.





Initiative 2

- Maintain aging facilities
- Implement the CALFED program
- Improve flood management
- Sustain the Sacramento-San Joaquin Delta Levees

Rename to reflect action/program

California depends on vast statewide water management systems to provide clean and reliable water supplies, protect lives and property from flood, withstand drought, and sustain environmental values. These water management systems include physical facilities and their operational policies and regulations. Facilities include over 1,200 State, federal, and local reservoirs, as well as canals, treatment plants, and levees. Systems are often interconnected. The operation of one system can depend on the smooth operation of another. The successful operation of the complete system can be vulnerable if any parts fail.

California's facilities require costly maintenance and rehabilitation as they age. In addition, they face many challenges: meeting the needs of a growing population and changing water use patterns, withstanding catastrophic natural events like earthquakes and floods, and adapting to the changes that accompany global climate change.

By maintaining, rehabilitating, and expanding our water facilities, we improve the efficiency and flexibility of our water management systems. Improvements will include new water storage, additional conveyance capacity, and refinements in the way water systems are operated. These improvements will increase reliability and flexibility in the system, improving our ability to deal with the uncertainty of a highly variable water supply.

Maintain and improve statewide water management systems – the backbone of water management in California – to provide reliable water supplies, improve drought and flood management, and sustain the Delta.

Water conservation contributes to better operation of water management systems. Conservation helps

Add a sentence re how this will improve the environment.

Restructure the lead in to fit this section

Maintain and Improve Statewide Water Management Systems

maintain the capacity of the facilities to meet water needs by reducing overall demand on the systems.

System improvements are not limited to the major state and federal water projects; local agencies provide about 70 percent of California's water supply.

By improving our water management systems, we will assure that Californians have clean, affordable, and reliable water supplies for agriculture, industry, businesses and homes. & The environment

Maintain aging facilities

California must maintain and rehabilitate its aging water facilities, especially those that provide drinking water, sewage treatment, water delivery, and flood control. These are operated by State, federal, and local entities.

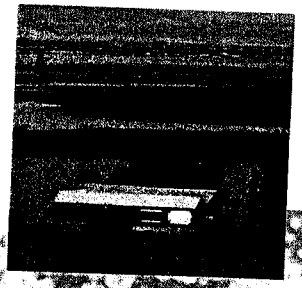
Aging facilities risk public safety, water supply reliability, and water quality. The State Water Project is over 30 years old; the federal Central Valley Project is over 50 years old. Some local facilities were constructed nearly a century ago. These and other aging facilities must be ~~carefully~~ maintained and rehabilitated to protect public investment and ensure that our water management systems continue to provide intended services.

Implement the CALFED Program

The CALFED Bay-Delta Program is intended to develop and implement a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta System. The program significantly reduced conflicts over Delta operations through better agency coordination and implementation of comprehensive resource management solutions.

The CALFED program proposes actions to restore ecosystem structure and function, protect water quality, modify the existing Delta conveyance system, improve pumping operations of the State Water Project to increase reliability and enhance fish protection, and develop additional water storage. State government must provide leadership for the CALFED Bay-Delta Program. This will continue our progress toward meeting CALFED objectives of improved water supply reliability, good water quality, ecosystem restoration, and levee system integrity.

Aging facilities risk public safety, water supply reliability, and water quality.



Initiative 2 Maintain and Improve Statewide

The need for adequate flood management is more critical now than ever before.

Improve Flood Management

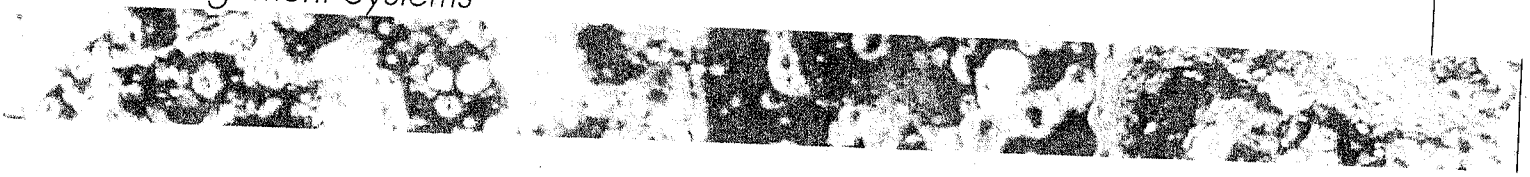
The need for adequate flood management is more critical now than ever before. California's Central Valley flood control facilities are deteriorating and, in some places, literally washing away. At the same time, the Central Valley's growing population is pushing new housing and job centers to areas that are particularly vulnerable to flooding. Yet, in recent years, funding to maintain and upgrade flood protection facilities has sharply declined. Compounding these challenges are recent court rulings that hold State and local agencies liable for flood-related damages when levees fail.

Flood management in the Central Valley needs an approach that will achieve both short-term and long-term solutions. This approach should include a set of strategies that involve policy changes, program reforms, and funding proposals to better protect California from the devastating consequences and economic impacts caused by floods. These strategies include: improved maintenance, system rehabilitation, better emergency response, sustainable funding for flood management programs, better flood mapping and public education. Legislative and constitutional actions may include stronger flood insurance requirements, a Central Valley flood control assessment district, and a reduction in taxpayer exposure for funding flood disaster claims.

Infrastructure improvements are not limited to the major state and federal water projects; local agencies provide about 70 percent of California's water supply.

Flood management cannot occur in isolation; whenever possible it must be integrated with other objectives such as ecosystem restoration, farmland protection, and other multi-objective management of floodplains.

Water Management Systems

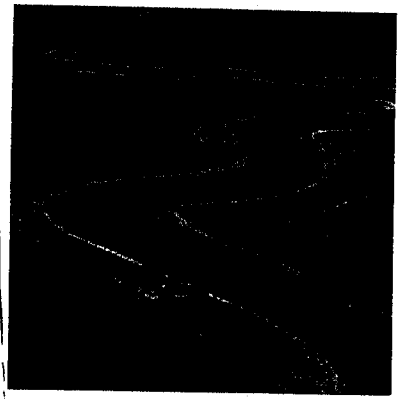


Sustain the Sacramento-San Joaquin Delta Levees

The levees of the Sacramento-San Joaquin Delta protect water supplies needed for the environment, agriculture, and urban uses. Delta levees also protect roadways, cities, towns, agricultural lands, as well as terrestrial and aquatic habitat. The CALFED Delta levee program is intended to reduce the risk of catastrophic breaching of these levees.

There are many factors that make it quite challenging to sustain the Delta levees. Subsidence of Delta islands continues to occur as peat soils oxidize, increasing the pressure on levees that protect the islands. A catastrophic earthquake in or near the Delta might cause multiple levee failures that would draw seawater into the Delta, rendering the water unfit for irrigation or human consumption until levees were repaired and seawater was flushed from the Delta. Climate change is causing sea levels to rise and may also increase the magnitude of flood flows. Maintenance and improvement of Delta levees is costly, and available funds have not kept pace with needs. Levee failures are extremely costly to repair, further burdening the ability to fund adequate maintenance and rehabilitation.

The Sacramento-San Joaquin Delta, like the Central Valley flood control system, needs an approach that will achieve both short-term and long-term solutions. This approach should maintain the services and values we get from the Delta levee system and should be sustainable over the long term.



The levee system of the Sacramento-San Joaquin Delta protects water supplies needed for the environment, agriculture, and urban uses.

wouldn't this be a good argument for impeccable Maintenance?

Rather than an argument for why maintenance is not happening?

Conclusion

California needs a sustainable and reliable water supply in 2030. Californians can secure this water supply for the future by making the right choices and the necessary investments. To ensure that water use is sustainable, California water management must be based on three foundational actions: use water efficiently, protect water quality to get maximum utility from existing supplies, and manage water in ways that protect and restore the environment.

To ensure a reliable water supply, water management must pursue two initiatives: first, promote and practice integrated regional water management; and second, maintain and improve statewide water management systems.

California faces big water management challenges in the future, especially during critically dry years. Fortunately, there are tools available to cope with these challenges. There are a host of strategies that will help ensure successful management of water and related natural resources. Californians need only to marshal the cooperation and dedication to implement these strategies.

In future Water Plan updates, we will refine our ability to measure water use and project the effects of our management strategies. For now, California Water Plan Update 2005 provides a guide to make the right choices so our state has the water needed for our people, our growing economy, and the environment in the years to come. Working together, we can secure our water future for the next generation of Californians.

Recommendations

California Water Plan Update 2005 provides recommendations for the next 25 years. These recommendations are directed at California decisionmakers throughout the state, State government (executive and legislative branches), DWR and other State agencies.

1. California needs to invest in reliable, high quality, sustainable, and affordable water conservation, efficient water management, and development of water supplies to protect public health, and to maintain and improve California's economy, environment, and standard of living.

2. State government must provide incentives and assist regional and local agencies and governments and private utilities to prepare integrated resource and drought contingency plans on a watershed basis; to diversify their regional resource management strategies; and to empower them to implement their plans.

3. State government must lead an effort with local agencies and governments to inventory, evaluate, and propose management strategies to remediate the causes and effects of contaminants on surface and groundwater quality.

4. California needs to rehabilitate and maintain its aging water infrastructure, especially drinking water and sewage treatment facilities, operated by State, federal, and local entities.

5. State government must continue to provide leadership for the CALFED Bay-Delta Program to ensure continued and balanced progress on greater water supply reliability, water quality, ecosystem restoration, and levee system integrity.

6. State government needs to take the lead in water planning and management activities that: (a) regions cannot accomplish on their own, (b) the State can do more efficiently, (c) involve inter-regional, inter-state, or international issues, or (d) have broad public benefits.

7. California needs to define and articulate the respective roles, authorities, and responsibilities of State, federal, and local agencies and governments responsible for water.

8. California needs to develop broad and realistic funding strategies that define the role of public investments for water and other water-related resource needs over the next quarter century.

9. State government should invest in research and development to help local agencies and governments implement promising water technologies more cost effectively.

10. State government should help predict and prepare for the effects of global climate change on our water resources and water management systems.

11. DWR and other State agencies should improve data, analytical tools, and information management needed to prepare, evaluate, and implement regional integrated resource plans and programs in cooperation with other federal, tribal, local, and research entities.

12. DWR and other State agencies should explicitly consider public trust values in the planning and allocation of water resources and protect public trust uses whenever feasible.

13. DWR and other State agencies should invite, encourage, and assist tribal government representatives to participate in statewide, regional, and local water planning processes and to access State funding for water projects.

14. DWR and other State agencies should encourage and assist representatives from disadvantaged communities and vulnerable populations, and the local agencies and private utilities serving them, to participate in statewide, regional, and local water planning processes and to get equal access to State funding for water projects.